

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed May 11, 2006. Applicant appreciates the Examiner's consideration of the Application. At the time of the Office Action, Claims 1-5 and 11-12 were pending in the Application and stand rejected. Claims 1 and 11 have been amended to clarify, more particularly point out, and more distinctly claim inventive concepts previously present in these claims. In order to advance prosecution of this Application, Applicant has responded to each notation by the Examiner. Applicant respectfully requests reconsideration and favorable action in this case.

Drawings

Applicant thanks the Examiner for accepting and approving the drawings for Figure 2 filed on January 25, 2006.

Section 101 Rejection

Claims 1-5 and 11-12 were rejected under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. The Examiner argues that Claims 1 and 11 do not produce useful, concrete, and tangible results. Office Action at page 3, paragraph 5. Applicant respectfully traverses this rejection for the reasons discussed below.

Interim guidelines require that the claimed invention must transform an article or physical object to a different state or thing or otherwise produce a useful, concrete, and tangible result:

To satisfy section 101 requirements, the claim must be for a practical application of the Sec. 101 judicial exception, which can be identified in various ways:

- The claimed invention "transforms" an article or physical object to a different state or thing.
- The claimed invention otherwise produces a useful, concrete and tangible result, based on the factors discussed below.

Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility ("*Interim Guidelines*"), 1300 Off. Gaz. Pat. Office 142, at 10 (2005).

Useful Result

Applicant respectfully submits that Claim 1, particularly as amended, produces a useful result. To produce a useful result, a claimed invention must have a utility that is specific, substantial, and credible:

For an invention to be "useful" it must satisfy the utility requirement of section 101. The USPTO's official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. MPEP Sec. 2107 and Fisher, 421 F.3d at ___, 76 USPQ2d at 1230 (citing the Utility Guidelines with approval for interpretation of "specific" and "substantial").

Interim Guidelines at pages 20-21.

Applicant respectfully submits that Claim 1, particularly as amended, produces a useful result. For example, Claim 1 discloses (emphasis added):

determining whether an instruction or operation adds an information entry or removes the information entry from the database system, wherein for an add entry operation, the information entry is first added to an 'out' table *to improve the operational performance of the database system*, and wherein for a remove entry operation, the information entry is first removed from an 'in' table *to improve the operational performance of the database system*, the 'out' table is unsearchable by a user, the 'in' table and the 'out' table are located in a relational database.

Thus, Claim 1 produces a useful result.

Concrete Result

Applicant respectfully submits that Claim 1, particularly as amended, produces a concrete result. To produce a concrete result, a process must have a result that can be substantially repeatable or the process substantially produces the same result again:

Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. In other words, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. In re Swartz, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000) (where asserted result produced by the claimed invention is "irreproducible" claim should be rejected under section 101). The opposite of "concrete" is unrepeatable or unpredictable.

Interim Guidelines at page 22.

Applicant respectfully submits that Claim 1 is neither unrepeatable nor unpredictable. For example, "determining whether an instruction or operation adds an information entry or removes the information entry from the database system," "determining whether the instruction or operation is part of a modify entry instruction," and "employing the instruction or operation to amend the information entry of a database system," are neither unrepeatable nor unpredictable. Thus, Claim 1 produces a concrete result.

Tangible Result

Applicant respectfully submits that Claim 1, particularly as amended, produces a tangible result. To produce a tangible result, a process claim must set forth a practical application to produce a real-world result:

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a Sec. 101 judicial exception, in that the process claim must set forth a practical application of that Sec. 101 judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application."). "[A]n application of a law of nature or mathematical formula to a . . . process may well be deserving of patent protection." *Diehr*, 450 U.S. at 187, 209 USPQ at 8 (emphasis added); see also *Corning*, 56 U.S. (15 How.) at 268, 14 L.Ed. 683 ("It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted . . ."). In other words, the opposite meaning of "tangible" is "abstract."

Interim Guidelines at page 22.

Applicant submits that Claim 1 sets forth a practical application to produce a real-world result. For example, Claim 1, as amended, recites "employing the instruction or operation to amend the information entry of a database system." Thus, Claim 1 produces a tangible result.

For at least these reasons, Claim 1 and its dependent claims produce useful, concrete, and tangible results. For analogous reasons, Claim 11 and its dependent Claim 12 produce useful, concrete, and tangible results. Accordingly, Applicant respectfully requests reconsideration and allowance of Claims 1-5 and 11-12.

Section 103(a) Rejection

The Examiner rejects Claims 1-5 and 11-12 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,085,188 to Bachmann et al. ("*Bachmann*") in light of U.S. Patent No. 6,347,312 to Byrne et al. ("*Byrne*"). Applicant respectfully traverses this rejection for the reasons discussed below.

A. *Byrne-Bachmann* combination fails to disclose, teach, or suggest "the 'out' table is unsearchable by a user, the 'in' table and the 'out' table are located in a relational database."

Applicant respectfully submits that the combination of *Byrne* and *Bachmann* as proposed by the Examiner fails to disclose, teach, or suggest elements specifically recited in Claims 1-5 and 11-12. For example, the *Byrne-Bachmann* combination fails to disclose, teach, or suggest "the 'out' table is unsearchable by a user, the 'in' table and the 'out' table are located in a relational database," as recited in amended Claim 1 (emphasis added):

The Examiner relies on Type I and Type II caches of *Byrne* to teach 'in' and 'out' tables respectively. Office Action at page 4, paragraph 8. The *Byrne* caches, however, are ***not located in a relational database***:

In a preferred embodiment, the Type I and Type II caches are merely separate memory locations of the same random access memory (RAM) of the LDAP server, although any suitable storage area(s) may be used for this purpose.

By implementing the Type I and Type II caches in the directory service local storage area, repetitive search queries are handled without resort to the relational database 38. This caching mechanism provides significant performance improvements given that conventional LDAP directory servers are search-oriented and have many repetitive searches.

Byrne at column 5, line 63 - column 6, line 6 (emphasis added). *See also Id.* at Figure 5. *See also Id.* at column 3, lines 2-16.

Moreover, the *Byrne* Type I and II caches are searchable by the user:

In addition, the mechanism modifies information in the caches during (or as a result of) given directory service operations (e.g., modify, modify rdn, delete and add) that would otherwise invalidate the cached information. ***Thus, whenever a repetitive search query is generated within the directory service, search results are selectively fetched from the caches instead of being retrieved from the relational database.*** Cached information remains current at all times using the invalidation

routines. This operation significantly reduces the cost of processing the repetitive search query.

Byrne at column 2, line 65 - column 2, line 16 (emphasis added).

Thus, the combination of *Bachmann* and *Byrne* proposed by the Examiner fails to disclose, teach, or suggest “the ‘out’ table is unsearchable by a user, the ‘in’ table and the ‘out’ table are located in a relational database,” recited in Claim 1, as amended.

B. The proposed modification of *Byrne* would change the principle of operation of the *Byrne* caches.

The Type I and Type II caches of *Byrne* cannot be properly modified as proposed by the Examiner because the proposed modification of the *Byrne* caches would change the principle of operation of the *Byrne* caches. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP §2143.01 (citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)).

The proposed modification would change the principle of operation of the *Byrne* caches. The *Byrne* caches are located separately from the relational database. *Byrne* at Figure 5. *Byrne* discloses that “whenever a repetitive search query is generated within the directory service, search results are selectively fetched from the caches instead of being retrieved from the relational database.” *Id.* at column 3, lines 13-16. According to *Byrne*, “This operation significantly reduces the cost of processing the repetitive search query.” *Id.* at column 3, lines 18-19. That is, the *Byrne* caches are located separately to avoid fetching search results from a relational database, which may reduce processing costs. Modifying the *Byrne* caches to yield tables *located in a relational database* would change the principle of operation of the *Byrne* caches. Thus, the *Byrne* caches cannot be properly modified as proposed by the Examiner.

For at least these reasons, the *Byrne-Bachmann* combination fails to disclose, teach, or suggest the combination of elements of amended Claim 1 and its dependent claims. For analogous reasons, the *Byrne-Bachmann* combination fails to disclose, teach, or suggest the combination of elements of amended Claim 11 and its dependent claims.

Accordingly, Applicant respectfully requests reconsideration and allowance of Claims 1-5 and 11-12.

CONCLUSION

Applicant have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicant respectfully requests full allowance of all the pending claims.

If the Examiner believes a telephone conference would advance prosecution of this case in any way, the Examiner is invited to contact Keiko Ichiye, the Attorney for Applicant, at the Examiner's convenience at (214) 953-6494.

Although Applicant believes no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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